

THE GEOGRAPHICAL DISTRIBUTION OF THE  
GENUS *MEGASCOPS* IN NORTH AMERICA.

BY EDWIN M. HASBROUCK.

IN the earlier accounts of travel and exploration in this country the little Screech Owl is referred to by nearly every writer on natural history. In 1758 Linnæus described and named the Red Owl *Strix asio*, and it remained for many years the sole known representative of the genus *Megascops*. Later birds closely related to this species were found in various quarters of the globe, until now the genus may be said to have an almost cosmopolitan distribution.

In 1832 it was discovered that material differences existed between the birds of the eastern United States, and those from the southwest, the latter being described as the Mexican Screech Owl (*Scops trichopsis*). In 1854 a further separation occurred when the Texan form (*Scops mccallii*) was described. Since the discovery of the Texan race, ornithologists have come to recognize more and more the importance of faunal areas, and the evident relation to them of peculiar local forms. *M. asio* has been divided into so many subspecific forms that there appears to be absolutely no region left (in this country) from which a valid form is likely to be described. So complicated and so little understood is the group, that up to the present time no attempt has been made to define the geographical distribution of its numerous forms. Future data must necessarily make some changes in the details of distribution as here mapped, particularly in the case of southern species which as yet are little known, but with these exceptions it is hardly probable that any material differences will be effected.

The present paper includes all members of the *Megascops* group known to occur north of Panama, a total number of twenty-one<sup>1</sup> forms, of which ten are full species, and eleven subspecies, as follows.

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<sup>1</sup> Three forms recently described by Brewster, *aikeni*, *macfarlanei*, and *saturatus* have not as yet been admitted to the A. O. U. list of North American birds, but are included here as they appear to rest on a good basis.

- Megascops barbarus (*Scl. & Salv.*).  
Megascops nudipes (*Vicill.*).  
Megascops cassini (*Ridgw.*).  
Megascops cooperi (*Ridgw.*).  
Megascops brasilianus guatemalæ *Sharpe*.  
Megascops hastatus *Ridgw.*  
Megascops vermiculatus *Ridgw.*  
Megascops aspersus *Brewst.*  
Megascops vinaceus *Brewst.*  
Megascops asio (*Linn.*).  
Megascops asio floridanus (*Ridgw.*).  
Megascops asio mcallii (*Cass.*).  
Megascops asio bendirei (*Brewst.*).  
Megascops asio kennicottii (*Elliot*).  
Megascops asio maxwelliæ (*Ridgw.*).  
Megascops asio trichopsis (*Wagl.*).  
Megascops asio aikeni *Brewst.*  
Megascops asio macfarlanei *Brewst.*  
Megascops asio saturatus *Brewst.*  
Megascops flammeolus (*Kaup*).  
Megascops flammeolus idahoensis *Merriam*.

Of these, nine are strictly Mexican and Central American.

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Megascops cassini (*Ridgw.*).  
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Megascops brasilianus guatemalæ *Sharpe*.  
Megascops hastatus *Ridgw.*  
Megascops vermiculatus *Ridgw.*  
Megascops aspersus *Brewst.*  
Megascops vinaceus *Brewst.*

While the remaining twelve are to be found within the territory of the United States, three of the latter, *Megascops asio trichopsis*, *Megascops asio mcallii*, and *Megascops flammeolus*, are found also in Mexico, leaving nine that may be considered North American in the generally accepted sense of the term.

It is a noticeable fact that, of the nine forms strictly Mexican and Central American, only one, *Megascops brasilianus guate-*

*malæ*, is a subspecific one; while on the other hand, of the nine strictly North American forms, only one, *Megascops asio*, is specific. This is possibly due to the fact that the northern birds have been more thoroughly studied than have the tropical ones, and while much work has been done in this latter region, so many localities remain to be explored that the future may show an entirely different state of affairs.

If we compare the map of distribution with the faunal areas, it will be seen that the range of several of the subspecies coincides very closely with the boundaries of certain faunas (a fact particularly noticeable in the United States), while others are distributed over an area embracing two or more, a circumstance which, viewed from the standpoint of evolution, would go to show that those forms whose range is most widely diffused are the oldest, while those circumscribed within certain life areas have become more recently differentiated.

In treating of the common Screech Owl (*M. asio*), whose wide distribution is so well known, it seems useless to mention records for every State included in its range; accordingly a general statement of distribution accompanied by outlying localities will be sufficient, more especially since the accompanying map shows the territory covered in full. With the remaining forms I shall enter more into detail.

Beginning with our own group, we have: —

### **Megascops asio** (*Linn.*). COMMON SCREECH OWL.

This is the most widely distributed of the group, and doubtless the oldest in North America, since the range is extended into four of the principal life areas; namely, the Austroriparian, Carolinian, Alleghanian, Canadian and portions of the Great Plains faunas. No type exists. The species is first mentioned by Catesby in 1731 from the Carolinas, and this term "the Carolinas" will forever have to suffice for type locality. It is found throughout the Eastern United States from the northern portions of South Carolina, Georgia, Alabama and Mississippi northward to southern Canada, and as far west as the central and western parts of Nebraska and Kansas, in which latter region it occurs occasionally along the timbered regions of the bottom lands. In Texas its range is somewhat obscure, inasmuch as one

specimen of a lot from Gainesville was identified as *Megascops asio* proper, and all the remainder as *mccallii*, while Bendire records it from Long Point — so far south that the record is really remarkable, as *floridanus* or *mccallii* would be the more likely forms to occur. With the exception of the Atlantic coast north of Charleston, the species does not occur below the one hundred feet contour line, from which it ranges over the whole area save the higher portions of the Alleghanies.

The following records indicate the boundaries of its distribution.

Newfoundland (Forest and Stream, III, 1874, 53).

Nova Scotia. *Pictou* (Prof. G. W. McQuarrie, personal information).

New Brunswick. *Newcastle* (Phillip Cox, in epist.).

Maine. *Calais* (Geo. A. Boardman, in epist.); *New Vineyard* and *Kingfield* (F. H. Carpenter, Orn. and Oöl., XI, 1886, 177).

Ontario. *Annan* (A. C. Sloam, in epist.); *Bellville* (James T. Bell, in epist.); *Ardrree* (John Blair, in epist.).

Michigan. *St. Marys* (Morris Gibbs, in epist.); *Keweenaw Point*, (Kneeland, list of 1860).

Wisconsin. *Milwaukee Co.* (O. & O. XIV, 1889, 57); “*northern part*” (Henry Pratten, Rep. Geol. Surv. Wis. Iowa & Minn. 1852, 622).

Minnesota. “*Northern part*” (Henry Pratten, l. c.); *Yellow Medicine Co.*, (Albert Lane, O. & O. XIV, 1889, 57).

South Dakota. *Clay Co.* (G. S. Agersborg, Auk, II, 1885, 284).

Nebraska. *Ong* (Joel Nelson, in epist.).

Kansas. *Ellis* (Dr. Louis Watson, in epist.).

Texas. *Gainesville* (G. H. Ragsdale, in epist., on authority of W. Brewster); *Long Point* (Capt. Chas. E. Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 355).

Mississippi. *Waverly* (G. V. Young, in epist.—possibly *floridanus*).

Alabama. *Greensboro* (Dr. W. C. Avery, in epist.).

North Carolina. *Raleigh* (H. H. & C. S. Brimley, in epist.); *Oakdale* (Robert J. Thompson, in epist.); *Weaverville* (J. S. Cairns, in epist.).

South Carolina. *Chester* (L. M. Loomis, Bull. N. O. C. 1879, 216).

## Megascops asio floridanus (*Ridgw.*). FLORIDA SCREECH OWL.

The Florida Screech Owl is confined almost exclusively to the Austroriparian region; and while but little if any value can be attached to it as a faunal race, the fact remains that but a single record has been found within the Carolinian fauna. With the exception of this record — McPhersonville, S. C.—not

a single instance appears to be known of its occurrence at a greater elevation than five hundred feet. It is essentially a bird of the low country, although not found on the Atlantic coast farther north than about Lat.  $34^{\circ}$ , while in the Mississippi Valley it may go a trifle beyond that, but no data exist for such assumption, and its distribution across this great river basin is to a certain extent hypothetical. The type specimen of this species, deposited in the U. S. National Museum, was described from Indian River, Florida, by Ridgway in 1873. The race occurs throughout the Gulf States to about the southern limit of the preceding, or to about Lat.  $33^{\circ}$  or  $34^{\circ}$ . Just how far west it extends is uncertain, but probably to extreme eastern Texas, as it has been taken in De Soto Parish, Louisiana, just over the border. Inasmuch as the Austroriparian region extends into Texas as far west as Long.  $98^{\circ}$ , it is not improbable that *floridanus* occurs within the limits of this State.

The following are the records of its distribution.

**South Carolina.** *Charleston* (Arthur T. Wayne, in epist.); *Grahams Turnout* (specimen in U. S. Nat. Mus.); *Mount Pleasant* (spec. in coll. Wm. Brewster); *Macphersonville* (spec. in coll. Wm. Brewster).

**Georgia.** *Broro Neck* (spec. in coll. Wm. Brewster); *Macon* (spec. in U. S. Nat. Mus.); *St. Simon's Island, Wayne Co.*, and *McIntosh Co.* (H. B. Bailey, Bull. N. O. C. 1883, 41); *Sapelo Island* (spec. in U. S. Nat. Mus.).

**Florida.** *Gainesville* (spec. in U. S. Nat. Mus.); *Indian River* (type specimen in U. S. Nat. Mus.); *Palatka* (spec. in coll. E. M. Hasbrouck); *Caloosahatchee River* (W. E. D. Scott, Auk, IX, 1892, 132).

**Louisiana.** *New Orleans* (spec. in coll. Dr. A. K. Fisher); *Mandeville* and *De Soto Parish* (spec. in Am. Mus. Nat. Hist.).

### **Megascops asio mcallii (Cass.). TEXAN SCREECH OWL.**

The Texan Screech Owl was described by Cassin in 1854 from Texas, and if the more southern records are to be relied upon (the authority places them almost beyond doubt), the distribution is one of the most peculiar of any of the group. We first meet with it in Texas at Gainesville (an apparently exceptional record); in the vicinity of Houston; in Lee, Tom Green, and Concho Counties, as far west probably as Long.  $104^{\circ}$ . At Gainesville Mr. Ragsdale records it as uncommon, but it ap-

appears more likely from records of *trichopsis* from Eastland that the Gainesville birds are the Mexican form, but as no proof of this exists, until we have more information the record will have to stand for *mccallii*. Southward the range extends through eastern Mexico, on the basis of one or two records, to La Parada in Oaxaca, and even to the Province of Vera Paz, Guatemala, which last is undoubtedly an extra-limital occurrence. In the United States it apparently does not attain a greater altitude than 2000 feet, while in Mexico near Oaxaca and in Guatemala it is necessarily somewhat greater.

By far the greater number of records for *mccallii* would make it a bird of the Lower Sonoran region, while those from Brownsville, Texas, from Mexico and Guatemala, throw it into the Tropical fauna, its true range probably not extending farther than Oaxaca.

Following are the records.

**Texas.** *Gainesville* (G. H. Ragsdale, in epist.); *McLennon Co.* ('Elanoides,' O. & O. XV, 1890, 57); *Lee Co.* (J. A. Singley, O. & O. XII, 1887, 164); *Tom Green* and *Concho Cos.* (Lloyd, Auk, IV, 1887, 190); *Bandera Co.* (Ibis, 1865, 330); *Houston* (Rep. Miss. Val. Migra. 1888, 122); *Comal Co.*, (G. B. Benners, O. & O. XII, 1887, 65); *Nueces Co.* (spec. in coll. Wm. Brewster); *Corpus Christi* (Bull. No. 2, Ridgw. Orn. Club, 1887, 15); *Brownsville* (spec. in U. S. Nat. Mus.); *Lomita* (Bull. U. S. Geol. Surv. Terr. V, 1879, 417); *Losoya Crossing* (H. P. Attwater, O. & O. XII, 1887, 124); *Hidalgo* (Sennett, Bull. Geol. Surv. Terr. IV, 40).

**Mexico.** "*Northern Mexico*" (Lieut. Couch, spec. in U. S. Nat. Mus.); *La Parada, Oaxaca* (Sclater, P. Z. S. 1858, 296).

**Guatemala** (Vera Paz). *Salama* or *Cajabon* (Sci. & Salv. Ibis, I, 1859, 220).

## **Megascops asio bendirei** (*Brewst.*). CALIFORNIA SCREECH OWL.

This race was separated by Brewster in 1882, and the type specimen, from Nicasio, California, is now in the Brewster collection. With the exception of its occurrence at Fort Klamath, Oregon, it is confined to California west of the Sierra Nevada range. The State is so broken up as regards life areas that it is not surprising to find it inhabiting four,—Upper and Lower Sonoran, Transition, and Boreal—the last to a limited

extent only. Rarely, if ever, is this Owl found at a greater elevation than five thousand feet, the five thousand feet contour bounding very nicely on the east the records of capture so far as known. The form found in the northwestern part of the State is somewhat questionable, it being either the present race or Mr. Brewster's recently described form *saturatus*. It is hardly probable that the last-named ranges so far south, but for the present, owing to the lack of material, the matter will have to remain in doubt.

The following are the records.

**California.** *Nicasio* (type spec. Brewster, Bull. N. O. C. VIII, 1882, 31); *San Bernardino, Poway, Santa Cruz, Alameda Co., Contra Costa Co., "the Valleys"* (Land Birds Pacif. Coast, 1890, 51); *San Francisco* (Zoe, II 1891, 167); *Santa Barbara* (C. P. Streater, O. & O. XI, 1886, 69); *Fort Crook* (Townsend, Proc. U. S. Nat. Mus. 1887, 203); *Fort Tejon* (Henshaw, Wheeler Surv. 1876, App. JJ. 226); *Marin Co., Stockton, Oakland, Riverside, Shasta*, specs. in U. S. Nat. Mus.); *Nevada City* (Proc. Bost. Soc. Nat. Hist. XVII, 1875, 365).

**Oregon.** *Fort Klamath* (Merrill, Auk, V, 1888, 146).

**Megascops asio kennicottii (Elliot).** KENNICOTT'S  
SCREECH OWL.

Not a single specimen of this bird, so far as known, has been taken since 1867, when Elliot's type (45,847, U. S. N. M.) was described from Sitka, Alaska. Numerous specimens from British Columbia, Washington, Idaho and western Montana have been referred to this race, but a recent subdivision by Mr. Brewster makes the type unique. It is of course boreal in its affinities, and probably occurs in northern British Columbia.

**Megascops asio maxwelliæ (Ridgw.).** ROCKY MOUNTAIN  
SCREECH OWL.

This was described in 1883 from a specimen sent from Boulder, Colorado, by Mrs. Maxwell, and now in the National Museum. The race is an exceedingly light colored one, frequenting the cottonwood timber along the streams and among the foothills, and appears to be confined to the Rocky Mountain region from southern Montana to central Colorado. Fort Custer, Montana, is apparently the northern limit of this form, although Bendire

(Spec. Bull. No. 1, U. S. N. M., 1892, 355) mentions a Screech Owl taken by Macoun in northwestern Manitoba which he says is "presumably referable to this race." The Rocky Mountain Screech Owl is a bird of the boreal and transition zones, and although no records are known for its occurrence in Wyoming, it undoubtedly is to be found in the central and western portions of the State. The records place it at an elevation not greater than six thousand feet, but as they are extremely scarce it is difficult to give its true vertical range, and it probably occurs in many portions of the State on the eastern slope of the Rockies.

It has been reported from the following localities.<sup>1</sup>

Colorado. *Boulder* (Mrs. Maxwell, spec. in U. S. Nat. Mus.); *Denver* (A. W. Anthony, per Bendire, Auk, 1889, 301); *Boulder* and *Larimer Cos.* (Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 364).

Montana. *Fort Custer* (Bendire, Auk, VI, 1889, 301).

### Megascops asio trichopsis (*Wagl.*). MEXICAN SCREECH OWL.

This is the earliest form distinguished from *asio*, and one of the most peculiar in distribution; being found on the peninsula of Lower California, in central Arizona and east to central Texas, and far down the Mexican plateau. Until the present year *trichopsis* was not known east of New Mexico, but recently while examining some material collected by myself in Palo Pinto County, Texas, in 1888, two Screech Owls collected on September 9 were pronounced by Mr. Ridgway to be unquestionably this form, one of them typical. A third specimen, a young bird taken at Lampasas, Texas, on July 3, 1887, also resembles *trichopsis* so much that I have no hesitation in pronouncing it to be the same. These records extend the range of *trichopsis* some three or four hundred miles to the east, making doubtful the true status of some central Texas specimens that have not undergone comparison. In Mexico the only record for this form is at

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<sup>1</sup>Mr. L. M. McCormick, who collected in the Black Hills in Dakota the past fall (1892), reports having heard a Screech Owl on several occasions, which he was unable to secure. This is the first instance known of the occurrence of any of the genus from this region. The bird was presumably of this species.



Guanajuato, thus making extremely difficult of delineation the distribution in this country. The Mexican Screech Owl is decidedly Lower Sonoran in its affinities, but on the northern border of its range passes into the Upper Sonoran and Transition, while at Cape St. Lucas it has a tinge of the Lower Californian and Tropical life areas. It appears to range to an elevation of about seven thousand feet, Fort Wingate, New Mexico, being the highest known record in the United States. The records are as follows.

**Arizona.** *Fort Verde, Picacho Station, Casa Grande, Fort Lowell* (spec. in U. S. Nat. Mus.); *Tucson* (Rhoads, Proc. Phil. Acad. Nat. Sci. 1892, 116); *Fort Mojave* (Bull. U. S. Surv. Terr. VI, 1881, 241, 242); *Bill Williams Fork*,<sup>1</sup> *Camp 118* (P. R. R. Surv. X, 1859, No. 3, 20); *Camp Grant*,<sup>1</sup> *Gila River*<sup>1</sup> (60 m. S. of Apache), *San Pedro*<sup>1</sup> (Henshaw, Zool. Wheeler Surv. V, 1879, 406); *Fort Huachuca* (spec. in U. S. Nat. Mus.); *Oracle* (Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 368).

**New Mexico.** *Fort Wingate* (Spec. in U. S. Nat. Mus.).

**Texas.** *Palo Pinto Co. and Lampasas Co.* (spec. in coll. of E. M. Hasbrouck).

**Lower California.** *Cape St. Lucas* (spec. in U. S. Nat. Mus.); *Cardon Grande* and *El Rancho Viejo* (Bryant, Proc. Cal. Acad. Sci. Ser. 2, II, 284); *Valladares* (Anthony).

**Mexico.** *Guanajuato* (spec. in U. S. Nat. Mus.).

### **Megascops asio aikeni Brewst. AIKEN'S SCREECH OWL.**

This and the two following forms have been recently described by Mr. Brewster, and while not as yet admitted to subspecific rank, their claim to such appears to rest on sufficiently good basis to warrant their consideration in the present paper. The type specimen now in the Brewster collection was described from El Paso County, Colorado, while a record for "*mccallii*" from La Plata County I have no hesitation in referring to this race.

It is questionable if Aiken's Screech Owl occurs at any point north of Douglas County, Colorado, but it probably inhabits all the more open country along the foothills of the Rocky Moun-

<sup>1</sup> These specimens were originally reported as *mccallii*. Owing to the fact that the specimens from Bill William's Fork (Camp 118) were subsequently deposited in the National Museum and marked *trichopsis*, and also to the strides we have made in the knowledge of distribution, I have taken the liberty to change all Arizona records of *mccallii* to *trichopsis*. It will be readily seen from the map that it is impossible for *mccallii* to occur in Arizona.

tains south at least to central New Mexico and northeastern Arizona.<sup>1</sup>

*Aikeni* is unquestionably a bird of the Transition zone with little probability of its occurrence in the Boreal, since it inhabits the foothills, in which case it is probably one of the more recently differentiated members of the group. From the few records of its occurrence, it apparently is not found below five thousand or above nine thousand feet.

Colorado. *El Paso Co.* (Brewster, Auk, VIII, 1891, 139); *La Plata Co.* (Morrison, O. & O. XIII, 1888, 115).

New Mexico. *Fort Wingate* (Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 370).

### *Megascops asio macfarlanei* Brewst. MACFARLANE'S SCREECH OWL.

The type of this race, now in the Brewster collection, was obtained at Fort Walla Walla, Washington. To this form may be referred all Great Basin specimens of so-called *kennicottii*. It ranges probably from near the eastern foothills of the Cascade Mountains to western Montana, south to about Lat. 43°, and north into southern British Columbia. It has a vertical range of from one to probably seven thousand feet.

Washington. *Fort Walla Walla*, type locality (Brewster, Bull. N. O. C. VII, 27).

Oregon. *John Day River* (Brewster, l. c.); 20 m. S. W. *Camp Harney* (Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 371).

Idaho. *Nez Percé Ind. Res.* (spec. in Hasbrouck coll.).

Montana. *Hellgate* (spec. in U. S. Nat. Mus.).

### *Megascops asio saturatus* Brewst. PUGET SOUND SCREECH OWL.

With the exception of Kennicott's Screech Owl this is the extreme northwestern representative of the family in the United States, and is if anything more limited in distribution than *bendirei*. Brewster's type was described from Victoria, British Columbia, and the majority of records are from the same general region. The race is apparently boreal in its affinities, and very

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<sup>1</sup> Bendire, Special Bull. No. 1, U. S. N. M., 1892, 370.

little thus far is known concerning it, save that it is known from Salem, Oregon, to the shores and islands of Puget Sound, and from the mainland west of the Cascades.

**British Columbia.** *Victoria* (type spec. in coll. Wm. Brewster); *New Westminster* (spec. in U. S. Nat. Mus.); *Cadboro Bay* and *Comax* (spec. in coll. Wm. Brewster).

**Washington.** *Fort Vancouver* (Suckley, 1860, given as *kennicottii*).

**Oregon.** *Salem* (Brewster, Auk, VIII, 1891, 141).

### Megascops flammeolus (*Kaup*). FLAMMULATED SCREECH OWL.

This species, the type of which is deposited in the Dresden Museum, is the most widely distributed of any of the genus inhabiting North America; its range extending over much of the country covered by both the Sierra Nevada and Rocky Mountain ranges, and like *trichopsis* extending far down the Mexican plateau. It has been taken in northern California, southeastern Arizona, in Colorado nearly to the Wyoming line, at Mount Orizaba in Mexico, and as far south as Dueñas, Guatemala. It will thus be seen that the Flammulated Screech Owl is distributed over portions of both the Upper and Lower Sonoran, Transition, (and probably portions of the Boreal), and Tropical faunas, and from the records of capture is apparently not found at a lower altitude than four thousand feet. The United States records are more in number than has been generally supposed—sixteen in all (so far as learned), of which Colorado can lay claim to eleven.

The species has been recorded from the following localities.

**California.** *San Bernardino Mts.* (spec. in U. S. Nat. Mus.); *Fort Crook* and *Big Trees* (Land Birds Pacific Coast, 1890, 51).

**Arizona.** *30 miles S. of Camp Apache* (Wheeler Surv. Rep. Orn. Spec. 1874, 135); *Mouth of Little Colorado River* (Merriam, N. Am. Fauna, No. 3, 1890, 91).

**Colorado.** *Estes Park* (spec. in U. S. Nat. Mus.); *Gold Hill* and *Idaho Springs* (Bendire, Special Bull. No. 1, U. S. Nat. Mus. 1892, 375); *Boulder* (Mrs. Maxwell, Field and Forest, 1877, 210); *Mosca Pass* (Ingersoll, Bull. N. O. C. V, 1879, 121, and Brewster, *ibid.*, VIII, 1883, 123); near *Colorado City* (Brewster, l. c.); *Fremont Co.* (Deane, Bull. N. O. C. IV, 1879, 188); *Loveland* (Smith, O. & O. 1891, 27—three specimens).

Mexico. *Orizaba Mt.* (spec. in U. S. Nat. Mus.); "*Northern Mexico*" (spec. in Am. Mus. Nat. Hist.); *Valley of Mexico, City of Mexico*, "*Western Mexico*," and "*Mexico*," (Sharpe, Cat. Bds. Brit. Mus. II, 1875, 106).

Guatemala. *Ducñas* (Sharpe, l. c.—two specimens).

**Megascops flammeolus idahoensis Merriam.** DWARF  
 SCREECH OWL.

The type of this subspecies, described by Dr. Merriam from Ketchum, Idaho, remains unique, and is deposited in the collection of the U. S. Department of Agriculture.

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Coming now to the southern members of the group, the map may be taken as an illustration of the immense amount of work to be done, and the wide fields for research that present themselves in this portion of the world. Despite the researches of Boucard, Sumichrast and the collectors of Godman and Salvin in Mexico, of Zeledon, Cherrie, Carmiol and Cooper in Costa Rica, Richmond in Nicaragua, Townsend and Wittkügle in Honduras, and Arcé in Veragua, very few specimens of Screech Owls have been secured. So far as distribution goes, it may be well to state that practically nothing is known or is it possible to find sufficient records upon which to base anything like a correct map. Some are known only from the type, others are known from a second, third and fourth specimen secured at type localities, while still others have been taken from such widely separated places, and the records are so few, that it is next to impossible to tell what the true range is. It is of course possible and highly probable that some are extremely local, as is the case with members of the Trochilidae, but it is to be regretted that we have not sufficient records to substantiate such assumption, and we can but go by those that exist. With the exception of *aspersus* and *vinaceus* (Lower Sonoran) all are Tropical in their affinities, and in this connection nothing further will be said.

It seems peculiar that there should exist so much territory apparently uninhabited by any members of the genus—compare

the map of this region with the foregoing. In the former we had practically the whole country covered by one species or another; here, wide expanses of territory intervene between mapped areas from which no members of the group are known, and even whole political divisions are without a single representative of the genus *Megascops*.

### *Megascops barbarus* (Scl. & Salv.)

This species appears to be of restricted range, inasmuch as no records have been found outside of Guatemala. The type was taken at Santa Barbara, Vera Paz, and is now in the Selater and Salvín collection. The following are the records.

**Guatemala.** *Santa Barbara, Vera Paz* (Scl. & Salv. P. Z. S. 1868, 56—type); *Santa Barbara Mts.* (Ibis, 1861, 355); road between *Coban* and *Chicsa* (spec. in U. S. Nat. Mus.); “Central Guatemala” (Ridgway, Proc. U. S. Nat. Mus. 1878, 85–117).

### *Megascops nudipes* (Vieill.).

This also is restricted, being confined to Veragua, eastern Costa Rica, and the western portion of what is now Colombia, and eastern and central Costa Rica. Arcé took specimens in both Veragua and Costa Rica; in the latter place it was quite rare in the vicinity of San José, and occurred at only high altitudes.<sup>1</sup>

**Costa Rica.** *San José* (Cherrie, Auk, IX, 1892, 327); *La Carpintera* and *Cenantes* (spec. in U. S. Nat. Mus.).

**Veragua.** *Calobre* (Sharpe, Cat. Bds. Brit. Mus. II, 1875, 122).

### *Megascops cassini* (Ridgw.).

So far as known the only specimens of this Owl are those in the collection of the National Museum. The type, as described by Mr. Ridgway in 1887, was taken at Mirador, Mexico, and the only remaining records are Vera Cruz and Jalapa (near Vera Cruz), from specimens in the U. S. Nat. Museum. The species appears to be confined to the country immediately surrounding Vera Cruz, and to be one of the more restricted of the group.

<sup>1</sup> Auk, Vol. IX, 1892, 327.

**Megascops cooperi** (*Ridgw.*).

Like other forms of avian life recently brought to our notice, very little is known as yet of this bird. The type, now in the U. S. National Museum, was described from Santa Ana, Costa Rica, in 1878, and the only other locality from which the species is known is San José (also from a specimen in the National Museum), although Cherrie makes no mention of it in his list.<sup>1</sup>

**Megascops brasilianus guatemalæ** *Sharpe*.

This is the most widely distributed of the Central American forms, extending from western Guatemala along the mountain ranges to central Veragua, and is the only subspecific member of the genus occurring in Central America. It is but recently (1875) that the subdivision has been made, *Megascops brasilianus* having been hitherto recognized as inhabiting this region; and while typical specimens of *guatemalæ* have been taken in Brazil (Sharpe, Cat. Brit. Mus., 1875, 112), it is generally conceded that *brasilianus* does not come within the boundaries of North America. Specimens have been recorded as follows.

“Central America” (Sharpe, Cat. Bds. Brit. Mus. II, 1875, 114).

“Guatemala” (Sharpe, l. c.—6 specimens; Am. Mus. Nat. Hist.—1 spec.). *Coban* and *Choctum* (Ridgway, Proc. U. S. Nat. Mus. 1878, 85-117); *Los Salinas* (spec. in U. S. Nat. Mus.).

*Costa Rica* (Sharpe, l. c.); *San Juan* (spec. in U. S. Nat. Mus.); *San José* (Cherrie, Auk, IX, 1892, 327).

*Nicaragua*, *Acoyafa* (Sharpe, l. c.).

*Veragua* (Sharpe, l. c.—5 specimens); *Chitra* and *Chiriqui* (Ridgway, Proc. U. S. Nat. Mus. 1878, 85-117).

**Megascops hastatus** *Ridgw.*

The type of this species was described from Mazatlan, Sinaloa, Mexico, in 1887, and is deposited in the U. S. National Museum. At the present writing but one other specimen is known, also from Mazatlan. In cases of this kind it is of course impossible to give other than an assumed range, and of very limited extent.

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<sup>1</sup> Auk, Vol. IX, 1892, 322-329.

*M. hastatus* probably extends from the type locality back into the mountains for a considerable distance in every direction.

***Megascops vermiculatus* Ridgw.**

Costa Rica has been said to be by far the most productive of bird life of all the Central American Republics,—a statement that does not appear overdrawn on considering a fourth species of Screech Owl in addition to the three already mentioned from that country. *Megascops vermiculatus* was described from San José in 1887, the type and one other specimen, bearing simply “Costa Rica” on the labels, being now in the U. S. National Museum. Cherrie makes no mention of it in his list (Auk, IX, 327), and the species must be either exceedingly rare or overlooked in his paper. The range has been given as central Costa Rica in the vicinity of San José.

***Megascops aspersus* Brewst. SPOTTED SCREECH OWL.**

The only known specimen of this bird is in the collection of William Brewster, who described the species in 1887 from El Carmen, Chihuahua, Mexico.

***Megascops vinaceus* Brewst. CHIHUAHUA SCREECH OWL.**

Like the preceding species, nothing further is known of the Chihuahua Screech Owl beyond the type specimen taken at Duraso, Chihuahua, Mexico, and described in 1888.